CHAPTER I

INTRODUCTION AND CONCEPTUAL FRAMEWORK

INTRODUCTION
Teacher education involves professional preparation of teachers. The concept of teacher education is undergoing a rapid change throughout the world. It is no longer mere training as conceived earlier. It means the acquisition of that type of knowledge or information, skill and ability which helps a teacher to discharge his/her professional duties and responsibilities effectively and efficiently. It means shaping and reshaping the attitudes, habits and personality of a teacher. As the educational scenario goes through a vast change in the newly emerging society, the teachers need to be well equipped with knowledge which would create curiosity in the students to learn new things.

Good (1959) defines teacher education as “All formal and informal activities and experiences that helps to qualify a person to assume the responsibility as a member of the educational profession or to discharge his/her responsibility most effectively”.

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TEACHER EDUCATION

According to the Education Commission (1964-66) "Investment in teacher education can yield very rich dividends because the financial resources required are small when marked against the resulting improvements in the education of millions".

Teacher education is that knowledge, skill, competencies which are relevant to the profession of a teacher. Since teaching is an art and trained teacher alone can play a vital role in education as well as in the society, the Secondary Education Commission (1952-53) rightly states, "We are, however, convinced that the most important factor contemplated in educational reconstruction is the teacher, his personal qualities, his educational qualifications, his professional training and the place that he occupies in the school as well as in the community".

Teacher education emphasizes the development of specific knowledge, attitude, skills and behaviour patterns which an individual requires to perform a job adequately. So this education should develop those skills which are needed for a prospective teacher to become an excellent professional teacher. The purpose of training is to bring excellence in the specific job for which the individual is being trained.

Teacher education is not teaching the teacher to teach, but it is to learn to teach and teach to learn. Teacher education is a process aiming at the formation of positive attitudes towards teaching profession. So, a sound programme for professional education of teachers is essential for the qualitative improvement in education (Aggarwal, 1986).
NEED FOR TEACHER EDUCATION

Training is essential for every teacher. A trained teacher can do more than untrained teachers. Demand of profession, the objective and expectations from a teacher certify the need of teacher training. Many skills are needed to communicate the information effectively such as the skill of questioning, illustrating, demonstrating, explaining and the skill of logically sequencing the subject matter. Teaching is not only confined to impart knowledge of subject matter to others. In a wider perspective, teaching aims at an all-round development of personality. Skills or attitudes can be developed through systematic training. A systematized knowledge is required in order to achieve these skills and attitudes which require training (Kakkad, 1988).

FUNCTIONS OF TEACHER EDUCATION

(i) Better understanding of the student:- Teacher training is a must as it enables the potential teacher to understand the student better. The knowledge of educational psychology helps him a lot in dealing with children scientifically.

(ii) Building confidence:- Teacher training builds confidence in the potential teachers. A trained teacher can essentially face the class with confidence.

(iii) Methodology of teaching:- Through training, the future teacher becomes familiar with the methodology of teaching. He also gets essential knowledge of methods required for a particular subject.

(iv) Building a favourable attitude:- A sort of brainwash is also done through training. It helps in building favourable attitudes towards the teaching
profession. During the course of training, many doubts of the teacher trainees’ stand removed. It results in creation of love and respect for the teaching profession.

(v) Familiarizing with the latest in education: - Teacher training programme familiarises the future teachers with what is latest in education (Sita, 2005).

OBJECTIVES OF TEACHER EDUCATION

The objectives of teacher education should be formulated, keeping in view the following task of the teacher. The teacher of tomorrow should design a teaching situation conducive to the growth of pupils in all dimensions. The teacher requires a new type knowledge and attitude, atmosphere and facility to make his task easy, fruitful and confirming for the demands of the students. His education should be according to the necessities of the time and needs of the society. Based on this, the objectives of teacher education are given by different commissions and statutory bodies as follows (Reddy, 2006):

Kothari Commission (1964-66)

(i) To develop Gandhian values of education such as non-violence, truthfulness, self-discipline, self-reliance and dignity of labour.

(ii) To perceive teachers’ role as an agent of social change in the community.

(iii) To perceive his role not only as a leader of the children but also that of a guide to the community.

(iv) To act as a liaison between the school and the community and employ suitable ways and means for integrating community life and resources with school work.
(v) To help in the conservation of environment resources and preservation of historical monuments and other cultural heritage.

(vi) To possess warm and positive attitude towards children and their academic, socio-emotional and personal problems and skills to guide and counsel them.

National Council of Educational Research and Training (NCERT)

After in-depth deliberations, seminars, meetings and workshops the Teacher Education department of National Council of Educational Research and Training (NCERT), have evolved the following section-wise objectives of teacher education.

Secondary Teacher Education

The main function of secondary teacher education is helping future teachers to develop competence in teaching subjects of their specialization on the basis of an adequate theory of learning and knowledge of the subject by striving to keep in touch with the latest developments in the field of education. The teachers should develop an understanding of the aims and objectives of education in the Indian background, to promote an awareness of the role of the school and the teacher in inculcating a spirit of nationalism in achieving the ideals of creating a democratic and egalitarian society.

For handling the students effectively they should develop understanding, interest, attitudes and skills of the pupils which enable them to foster an all-round growth and development of children under their care and to provide guidance to individual pupils.

For the development of the society the teacher should be an agency to develop an understanding of the close relationship between society and the school, between life and school work. As a part of a professional consciousness as a teacher, the teacher should perform all his duties in a multi-fashioned dimension.
Primary Teacher Education

Primary teacher education is meant for preparing teachers for primary schools of 1 to 8. These teachers should meet the educational needs of the society. In this aspect, the teacher training programme meant for primary teachers should equip the teacher with necessary knowledge and skills to help the school children for democratic integrated balance and wholesome personality. The training programme should equip the teacher to educate school children for democratic leadership and fellowship. Their knowledge should be developed regarding the curriculum, methods and evaluation procedure in primary schools, needs of a secular, democratic and socialistic society in a scientific age and of the rules and regulations governing conditions of service for teacher. They should foster development of abilities, skills and attitudes among primary children.

Pre-Primary Teacher Education

The objective of pre-primary education is the promotion of the all-round development of the child in the age-group 2 ½ to 6 years by providing the right kind of environment, opportunity and guidance. Each child is to be considered as an individual growing and developing at his own pace. Promoting all-round development of the child will imply the physical and motor development, emotional development, social development, cognitive development and aesthetic development.

National Council for Teacher Education (NCTE)

NCTE framed the structure of curriculum of teacher education for different stages of education in 1978. This framework spelled out specific and pertinent objectives for each stage, apart from general objectives as follows:
Pre-Primary Stage

The main objective at the pre-primary stage is to acquire theoretical and practical knowledge about childhood education. Also, to develop understandings of the major principles of child growth and development with special reference to the environment of the child, develop skills, understandings, interests and attitudes which enable him to foster all-round development of the children under his care. For effective teaching development of communication skills such as telling stories, explaining situations and developing skills of simple visual aids from waste and indigenous materials are essential. Finally, the teacher should be able to provide a variety of learning experiences through the organization of musical, rhythmical and dramatic activities, play, work-experience, creative art and games.

Primary Stage

The primary teacher should possess sufficient theoretical and practical knowledge of health, physical and recreational activities, work-experience, art and music and skills for conducting these activities. They should develop an understanding of the psychological principles underlying the growth and development of the children at the age group from 6 to 14 years. For handling the child properly they should acquire theoretical and practical knowledge about childhood education, including integrated teaching. They should develop understandings of major learning principles which help in promoting cognitive, psychomotor and attitudinal learning and understand the role of the home, the peer group and the community in shaping the personality of the child and help to develop an amicable home-school relationship for mutual benefit.
Secondary Stage

At the secondary stage, the teacher should possess competence to teach subjects of his specialization on the basis of accepted principles of learning and teaching in the context of the new school curriculum. For making the classroom effective, the teacher should develop skills in identifying, selecting, innovating and organizing learning experiences for teaching the general and special subjects. They should be able to guide and counsel the children in solving their personal as well as academic problems. The teacher should foster high creativity among students at the secondary stage to undertake investigatory projects, action research and experimental projects, both in education and specialized subject areas.

ROLE OF NCTE IN TEACHER EDUCATION

The National Council for Teacher Education, in its previous status since 1973, was an advisory body for the Central and State Governments on all matters pertaining to teacher education, with its Secretariat in the Department of Teacher Education of the National Council of Educational Research and Training (NCERT). The National Policy on Education (NPE), 1986 and the Programme of Action hereunder, envisaged a National Council for Teacher Education with statutory status and necessary resources as a first step for overhauling the system of teacher education. The National Council or teacher Education as a statutory body came into existence in pursuance of the National Council for Teacher Education Act, 1993 (No. 73 of 1993) on the 17th August, 1995.

The National Council for Teacher Education (NCTE) has been set up as a statutory body by an Act of Parliament, 1993 to achieve planned and co-ordinated
development of teacher education throughout the country and to ensure the maintenance of norms and standards in teacher education. It covers the whole of teacher education starting from pre-primary up to senior secondary and non-formal and adult education. It has also brought out a number of publications on competency-based and commitment-oriented teacher education for quality school education through in-service, pre-service and distance education systems (Digumarti, 2004).

ORGANISATIONAL STRUCTURE

NCTE has its headquarters at New Delhi and four Regional Committees at Bangalore, Bhopal, Bhubaneswar and Jaipur to look after its statutory responsibilities. In order to enable the NCTE to perform the assigned functions including planned and co-ordinated development and initiating innovations in teacher education, the NCTE in Delhi as well as its four Regional Committees have administrative and academic wings to deal respectively with finance, establishment and legal matters and with research, policy planning, monitoring, curriculum, innovations, co-ordination, library and documentation, in-service programmes. The NCTE headquarters is headed by the Chairperson, while each Regional Committee is headed by a Regional Director.

FUNCTIONS OF NCTE

NCTE has taken several initiatives from time to time for improving the professional quality of teachers and has been concerned with the challenge of making teacher education relevant to the changing context of education and societal needs. In order to perform the assigned functions of the quality improvement co-ordinated development and innovations in teacher education,
there are four regional committees with headquarters at Delhi to carry out the work of NCTE. As per NCTE Act, each regional committee possesses an authority to recognize institutions offering course of training in teacher education and also give permission for a new course or training by recognized institution. The important functions of NCTE are to co-ordinate and monitor teacher education and its development in the country. They will examine and review periodically the implementation of the norms, guidelines and standards laid down by the council and to suitably advise the recognized institutions.

For making many innovations in education, NCTE will undertake and support researches, surveys and studies relating to manpower planning, effectiveness of various models in teacher education and the status of infrastructure facilities in teacher education. In order to gear the educational system to international scenario, it reviews the existing curriculum, instructional process, evaluation techniques, creating awareness for developing professional quality in teachers, instituting teacher education awards, identifying innovations and disseminating their results. Also, NCTE takes all necessary steps to prevent commercialization of teacher education (Digumarti, 2004).

RECOMMENDATIONS OF NCTE TO TEACHER TRAINING INSTITUTES

NCTE has made various suggestions for teacher training institutions for improving the quality of teacher education. The teacher trainees should make best use of library, multi-purpose laboratory and other available resources of the institutions. The teacher trainees should be provided training in the preparation and development of effective low-cost teaching learning materials and how to make
their best use in the classrooms. For making the teacher education programme innovative, the institutions should document and disseminate useful and relevant information to other teacher training institutions. For capacity building of the teacher trainees they should be exposed to various seminars and workshops on various issues. The trainees should use the latest available information technology for strengthening their teacher training programme. For capacity building inter-institution and inter-state visits should be organized for teacher trainees (Sita, 2005).

TEACHER EDUCATION FOR SECONDARY SCHOOLS

Secondary education occupies a very crucial place in education, not only because the children become more mature and develop additional psychological characteristics but also because of its special educational functions. The curriculum for this stage becomes enriched and stands in the mid-way of elementary and senior secondary schools. Further, it is an independent stage of education for the majority of students who prefer to enter into life. The teachers are expected to play somewhat different roles and prepare students for two-fold responsibilities to cater the needs of students for life and prepare them for senior secondary schools. But the major consideration which demands the attention of teacher educators is to maintain the continuity of integrated approach in curriculum development and its transactional strategies and prepare students for subject centred approach in future. Since teachers at secondary stages have to deal with adolescents they must understand their problems and offer solutions to them including their social transformation and nurturing of their uniqueness. This requires a teacher education programme rich in content to realize the following objectives (Dash, 2004):
i. To maintain the continuity of elementary education and to prepare students for the study of diversified courses and appropriate selection of subjects at the senior secondary stage.

ii. To empower the prospective teachers to adopt disciplinary approach in teaching and to develop among students interest in such studies.

iii. To train them in the use of ICT, its advantages, disadvantages and safeguards,

iv. To curtail the educational and cultural gap between the rich and the poor and the schools meant for them by adopting suitable educational approaches.

v. To develop among the prospective teachers love for Indian culture and its contribution to the world and to inculcate a sense of national pride and identity.

vi. To enable them to develop the teaching competencies and performance skills for the subjects they have to teach, using appropriate aids including ICT, organize supplementary educational activities and elicit community co-operation.

vii. To empower student teachers not only to understand the nature of subjects but also the unity and integrity of knowledge.

viii. To prepare them for the development of personality, inculcation of values, fostering the spirit of citizenship and patriotic feeling.
ix. To create among them the awareness of environmental protection and need to maintain an ecological balance.

x. To enable students to acquire, construct, process and utilize knowledge as per the requirement of circumstances.

xi. To help them to grasp the main thrust of the curriculum and develop appropriate transactional and evaluation strategies for the same.

xii. To enable them to integrate yogic, healthy, kinesthetic, aesthetic and inclusive education with other educational activities.

xiii. To enable the prospective teachers to orient and sensitize the students with care and caution about Life Skill Education, HIV/AIDS preventive education and reproductive health.

xiv. To develop among them the capacity for undertaking action research for improving the quality of education, for the solution of its problems and to evolve the culture specific and community oriented pedagogy.

xv. To help them evolve happy and healthy school and community relationship and promote interest in life long learning.

xvi. To acquaint them with Indian nation’s distinctive character of ‘unity in diversity’ and adopt curriculum development practices to strengthen them.

**CURRICULUM FOR THE SECONDARY TEACHER EDUCATION**

The curriculum for the secondary teacher education course has to be developed keeping in view the concerns articulated here under (Reddy, 2006):
i. Objectives of secondary education/teacher education, updated curricular content with emphasis on competencies and values,

ii. Appreciation of the regional conditions and the main stream of nation’s life,

iii. Necessity to improve the standard and quality of school education and

iv. Utilization of the locally available resources.

The curriculum of secondary teacher education needs to maintain continuity with elementary school curriculum in certain respects. However, it has to become an independent entity in itself as the teachers at this stage are required to deal with mature students who have been exposed to many-sided social and life experiences. The students at this stage acquire new psychological characteristics for addressing appropriate teaching strategies that are to be deployed.

The curriculum of teacher education at this stage may include cultural heritage of India, its unity and diversity, its relevance, Indian philosophy, emerging Indian society, social problems, modernization, westernization, evil effects of violence and terrorism, challenges of value inculcation, HIV/AIDS preventive education, educational experiments, psychology of teaching and learning, mental health, deviant behaviour, sub-normal and abnormal children, pedagogical analysis of certain areas of social sciences and sciences, concentration of attention, environmental awareness, teaching competencies in school subjects, development of scientific temper, development of linguistic and mathematical skills, viewing learning as a life long activity, working with community, general health, reproductive health, hygiene, yogic and physical education, art of meditation, ICT, counselling and guidance, school management, action research, working with
community, status, history, problems and issues of secondary education, teachers and their social role, communal harmony and social cohesion, disaster management, development of patriotic feeling and citizenship. These theoretical components should focus on the realization of the goals of the curriculum and the transaction of its contents.

The pedagogy of teacher education at this stage should consist of practical teaching, development of reading materials for students of various stages in social science, physical sciences, language and mathematics and internship of substantial duration in a school under the supervision of a teacher educator. The student teachers will be required not only to acquire proficiency in the planning of lessons and their delivery but also learn the practical management of the class to arrange and organize school assemblies, prayers, promoting habits of cleanliness among the students and the school premises and proper seating arrangements for students. Practice of teaching should be a rigorous task which will include voice culture and its modulation. Emphasis will be laid on enhancing communication skills and use of ICT and on improvising and using teaching aids. They would be encouraged to prepare teaching aids by themselves. Every teacher in the school has to maintain certain records. The prospective teachers will learn this art and participate in the evaluation of students. Preparation of different kinds of tests would be their job.

**PEDAGOGICAL CONTENT KNOWLEDGE IN TEACHER EDUCATION**

Shulman (1986) advanced thinking about teacher knowledge by introducing the idea of pedagogical content knowledge. He claimed that the emphasis on teachers' subject knowledge and pedagogy were being treated as mutually
exclusive domains in research concerned with these domains. The practical consequence of such exclusion was production of teacher education programmes in which a focus on either subject matter or pedagogy dominated. To address this dichotomy, he proposed to consider the necessary relationship between the two by introducing the notion of Pedagogical Content Knowledge (PCK).

This knowledge includes knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching. This knowledge is different from the knowledge of a disciplinary expert and also from the general pedagogical knowledge shared by teachers across disciplines. Pedagogical content knowledge is concerned with the representation and formulation of concepts, pedagogical techniques and knowledge of what makes concepts difficult or easy to learn, knowledge or students’ prior knowledge and theories of epistemology. It also involves knowledge of teaching strategies that incorporate appropriate conceptual representations, to address learner difficulties and misconceptions and foster meaningful understanding. It also includes knowledge of what the students bring to the learning situation, knowledge that might be either facilitative or dysfunctional for the particular learning task at hand. This knowledge of students includes their strategies, prior conceptions, misconceptions students are likely to have about a particular domain and potential misapplications of prior knowledge.

Pedagogical content knowledge exists at the intersection of content and pedagogy. Thus it does not refer to a simple consideration of content and pedagogy together but in isolation; but rather to an amalgam of content and pedagogy thus enabling transformation of content into pedagogically powerful forms. Pedagogical
content knowledge represents the blending of content and pedagogy into an understanding of how particular aspects of subject matter are organized, adapted, and represented for instruction.

Shulman (1986) argued that having knowledge of subject matter and general pedagogical strategies, though necessary, were not sufficient for capturing the knowledge of good teachers. To characterize the complex ways in which teachers think about how particular content should be taught, he argued for "pedagogical content knowledge" as the content knowledge that deals with the teaching process, including "the ways of representing and formulating the subject that make it comprehensible to others".

The notion of pedagogical content knowledge has been extended and critiqued by scholars after Shulman. In fact, Shulman's initial description of teacher knowledge included many more. Matters are further complicated by the fact that Shulman himself proposed multiple lists in different publications that lack, in his own words, "great cross-article consistency". The emphasis on pedagogical content knowledge is based on Shulman's acknowledgement that "pedagogical content knowledge is of special interest because it identifies the distinctive bodies of knowledge for teaching. It represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented and adapted to the diverse interests and abilities of learners, and presented for instruction". Moreover, our emphasis on pedagogical content knowledge is consistent with the work of many other scholars and recent educational reform documents. Since its introduction in 1987, Pedagogical content knowledge has become a widely useful and used notion. For instance in the area of
science education scholars such as Anderson and Mitchner (1994); Hewson and Hewson (1988); Cochran, King and DeRuiter (1993); and professional organizations such as the National Science Teachers Association (NSTA, 1999) and National Council for the Accreditation of Teacher Education (NCATE, 1997) have all emphasized the value of PCK for teacher preparation and teacher’s professional development. The notion of pedagogical content knowledge has permeated the scholarship that deals with teacher education in general and the subject matter education in particular. It is valued as an epistemological concept that usefully blends together the traditionally separated knowledge bases of content and pedagogy.

FIG. 1

CONTENT AND PEDAGOGICAL KNOWLEDGE


Diagrammatically, it can be represented Shulman’s contribution to the scholarship of teacher knowledge by connecting the two circles, so that their intersection represents pedagogical content knowledge as the interplay between pedagogy and content. In Shulman's words, this intersection contains within it,
"the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations - in a word, the ways of representing and formulating the subject that make it comprehensible to others”.

Although Shulman did not discuss technology and its relationship to pedagogy and content, it is not believed that these issues were considered unimportant. Rather, the intent now is to bring explicit attention to these issues by considering how technology interacts with pedagogy as Technological Pedagogical Knowledge (TPK), with content as Technological Content Knowledge (TCK) and jointly as Technological Pedagogical Content Knowledge (TPCK).

TECHNOLOGICAL PEDAGOGICAL KNOWLEDGE (TPK)

Technological Pedagogical knowledge is knowledge of the existence, components and capabilities of various technologies as they are used in teaching and learning settings, and conversely, knowing how teaching might change as the result of using particular technologies. This might include an understanding that a range of tools exist for a particular task, the ability to choose a tool based on its fitness, strategies for using the tool’s affordances and knowledge of pedagogical strategies.

CHARACTERISTICS AND QUALITIES OF SECONDARY TEACHER EDUCATION STUDENTS

Every teacher trainee should possess the following core characteristics. They should be resourceful and should be aware of the existing conditions and practices. They must be able to build healthy relationship with students and to understand the pupils in front of them. He/She should possess the skills for effective teaching and skill
for interaction with pupils. They should have a mind to collect recent information in
the field and update his/her knowledge of their subject and recent changes in the
technology of teaching. The trainees should always have a psychological approach to
their students and their problems. They should be punctual, active and hardworking.
As we aim at the all-round development of the child, they should also focus on and
promote the co-curricular activities of the students.

The teacher trainees should have alertness, curiosity and keen observation
which are indispensable qualities of a scientist. They should also have logical
thinking. They should possess a mind to enrich their knowledge in environmental
awareness. They should utilize every opportunity carefully to clarify their doubts
regarding various issues of science and related areas.

Teaching involves complex skills. The secondary teacher education students
are getting training on complex skills. The teaching competency of the secondary
teacher education students depend heavily upon their language ability, logical
thinking, visual and spatial abilities, musical abilities, inter-personal abilities and
intra-personal ability. These are the very same components proposed by Howard
Gardner (1983) under the title multiple intelligence. So multiple intelligence of
secondary teacher education students contribute a lot towards teaching competency.

MULTIPLE INTELLIGENCE

The theory of multiple intelligence was first described by Howard Gardner in
“Frames of Mind” (1983). Gardner defines intelligence as “ability or set of abilities
that allow a person to solve a problem that is valued in one or more cultures”. He
proposed in his book “Frames of Mind” (1983), the existence of at least seven basic
intelligence. He has added an eighth and discussed the possibility of a ninth one after a few years (Gardner, 1999). His most current research indicates there are eleven distinct forms of intelligences.

**Verbal-Linguistic Intelligence**

Verbal-linguistic intelligence refers to the capacity to use words effectively: whether orally or in writing. This intelligence includes the ability to manipulate the syntax or structure of language, phonology or sounds of language, the semantics or meanings of language and the pragmatic dimensions or practical uses of language. Some of these uses include rhetoric (use of language to convince others to take a specific course of action), mnemonics (using language to remember information), explanation (using language to inform) and meta-language (using language to talk about itself).

**Logical-Mathematical Intelligence**

Logical-mathematical intelligence refers to the capacity to use numbers effectively and to reason well. This intelligence includes sensitivity to logical patterns and relationships, statements and propositions (if then, cause-effect), functions and other related abstractions. The kinds of processes used in the service of logical-mathematical intelligence include categorization, inference, generalization, calculation and hypothesis.

**Visual-Spatial Intelligence**

Visual-spatial intelligence refers to the ability to perceive the visual-spatial world accurately and to perform transformations on that perception. This intelligence involves sensitivity to colour, line, shape, form, space and the relationships that exist
between these elements. It includes the capacity to visualize, to graphically represent visual-spatial ideas and to orient oneself opportunity in a spatial matrix.

**Bodily-Kinesthetic Intelligence**

Bodily-kinesthetic intelligence refers to the expertise in using one’s whole body to express ideas and feelings and facility in using one’s hands to produce or transform things. The intelligence includes specific physical skills such as co-ordination, balance, strength, flexibility and speed.

**Musical-Rhythmic Intelligence**

Musical-rhythmic intelligence refers to the capacity to perceive, discriminate, transform and express musical forms. This intelligence includes sensitivity to the rhythm, pitch or melody and timbre or melody and timbre of a musical piece. One can have lingual or “top-down” understanding of music (global intuitive), a formal or “bottom-up” understanding (analytic, technical) or both.

**Inter-Personal Intelligence**

Inter-personal intelligence refers to the ability to perceive and make distinctions in the moods, intentions, motivations and feelings of other people. This can include sensitivity to facial expressions, voice and gestures: the capacity for discriminating among many different kinds of inter-personal cues and the ability to respond effectively to those cues in some pragmatic way.

**Intra-Personal Intelligence**

Intra-personal intelligence refers to the ability to act adaptively on the basis of self-knowledge. This intelligence includes having an accurate picture of oneself
(one’s strength and limitation), awareness of inner moods, intentions, temperaments, desires and the capacity for self discipline, self understanding and self esteem.

**Naturalistic Intelligence**

Naturalistic intelligence refers to the expertise in the organization and classification of the numerous species: the flora and fauna of an individual’s environment. This also includes sensitivity to other natural phenomena and in the case of those growing up in an urban environment, the capacity to discriminate among nonliving forms.

**IMPLEMENTING GARDNER’S THEORY IN THE CLASSROOM**

An awareness of multiple intelligence theory has stimulated teachers to find more ways of helping all students in their classes.

With an understanding of Gardner’s theory of multiple intelligence, teachers, school administrators and parents can better understand the learners in their midst. They can allow students to safely explore and learn in many ways and they can help students to direct their own learning. Adults can help students to understand and appreciate their strengths and identify real world activities that will stimulate more learning.

Multiple intelligence theory makes its greatest contribution to education by suggesting that teachers need to expand their repertoire of techniques, tools and strategies beyond the typical linguistic and logical methods. Multiple intelligence theory essentially encompasses what good teachers have always done in their teaching beyond the text and the blackboard to awaken student’s minds.
A teacher in a multiple intelligence classroom contrasts sharply with a teacher in a traditional linguistic classroom. In the traditional classroom, the teacher lectures while standing in front of the classroom, writes on the blackboard, asks students questions about the assigned reading and waits while students finish their written work. In the multiple intelligence classrooms the teacher continually shifts his/her method of presentation from linguistic to spatial to musical and so on, often combining intelligence in creative ways.

Multiple intelligence theory opens the door to a wide variety of teaching strategies that can be easily implemented in the classroom. The theory of multiple intelligence and innovative teaching strategies are relatively new to the educational scene.

Teachers need to know much about and understand students being taught in the classroom. The abilities, interests and needs of each student must be studied and accepted by the teacher. Teacher needs to be well versed in different intelligences possessed by students and how they may be used to assist each student to optimize instruction in many fields of knowledge and skills.

Awareness of multiple intelligence influences choice of relevant learning strategies. Teachers’ sense of efficacy enables them to adopt better learning strategies.

**SELF-EFFICACY**

Bandura (1986) defined self-efficacy as "peoples’ judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with judgments of what one can do with whatever skills one possesses”. Bandura also
affirmed that self-efficacy beliefs develop in response to four sources of information. These are enactive experience, vicarious experience, verbal persuasion and physiological and affective states. Enactive experience implies that success in the performance of a given task will increase the self-efficacy of the person who has successfully performed the task. The vicarious involves experiences where other people are seen to succeed or fail and how that can affect one's own self-efficacy. Verbal persuasion, if realistic, can encourage efforts that are more likely to increase efficacy through success, while physiological and affective conditions such as stress can also affect self-efficacy.

Consistent with the general formulation of self-efficacy, Tschannen Moran and Woolfolk Hoy (1998) defined teacher efficacy as a teacher’s “judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be unmotivated”. Researchers have found few consistent relationship between characteristics of teachers and the behaviours or learning of students. Teachers with high efficacy tend to experiment with methods of instruction, seek improved teaching method and experiment with instructional materials. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes.

A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in
activities. They set themselves challenging goals and maintain strong commitment to them. They heighten and sustain their efforts in the face of failure. They quickly recover their sense of efficacy after failures or setbacks. They attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. They approach threatening situations with assurance that they can exercise control over them. Such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression.

In contrast, people who doubt their capabilities shy away from difficult tasks which they view as personal threats. They have low aspirations and weak commitment to the goals they choose to pursue. When faced with difficult tasks, they dwell on their personal deficiencies, on the obstacles they will encounter and all kinds of adverse outcomes rather than concentrate on how to perform successfully. They slacken their efforts and give up quickly in the face of difficulties. They are slow to recover their sense of efficacy following failure or setbacks. Because they view insufficient performance as deficient aptitude it does not require much failure for them to lose faith in their capabilities. They fall easy victim to stress and depression.

**SOURCES OF SELF-EFFICACY**

Peoples’ beliefs about their efficacy can be developed by four main sources of influence. The most effective way of creating a strong sense of efficacy is through mastery experiences. Success builds a robust belief in one’s personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established.
If people experience only easy successes they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort. Some setbacks and difficulties in human pursuits serve a useful purpose in teaching that success usually requires sustained effort. After people become convinced they have what it takes to succeed, they persevere in the face of adversity and quickly rebound from setbacks. By sticking it out through tough times, they emerge stronger from adversity.

The second way of creating and strengthening self-beliefs of efficacy is through the vicarious experiences provided by social models. Seeing people similar to oneself succeed by sustained effort raises observers’ beliefs that they too possess the capabilities, master comparable activities to succeed. The impact of modeling on perceived self-efficacy is strongly influenced by perceived similarity to the models. The greater the assumed similarities the more persuasive are the models' successes and failures. If people see the models as very different from themselves their perceived self-efficacy is not much influenced by the models’ behaviour and the results its produce.

Modelling influences do more than provide a social standard against which to judge one's own capabilities. People seek proficient models that possess the competencies to which they aspire. Through their behaviour and expressed ways of thinking, competent models transmit knowledge and teach effective skills and strategies for managing environmental demands. Acquisition of better means raises perceived self-efficacy.
Social persuasion is a third way of strengthening people's beliefs that they have what it takes to succeed. People who are persuaded verbally that they possess the capabilities to master given activities are likely to mobilize greater effort and sustain it than if they harbour self-doubts and dwell on personal deficiencies when problems arise. To the extent that persuasive boosts in perceived self-efficacy lead people to try hard enough to succeed, they promote development of skills and a sense of personal efficacy.

Successful efficacy builders do more than convey positive appraisals. In addition to raising people's beliefs in their capabilities, they structure situations for them in ways that bring success and avoid placing people in situations prematurely where they are likely to fail often. They measure success in terms of self-improvement rather than by triumphs over others.

People also rely partly on their somatic and emotional states in judging their capabilities. They interpret their stress reactions and tension as signs of vulnerability to poor performance. In activities involving strength and stamina, people judge their fatigue, aches and pains as signs of physical debility. Mood also affects people's judgments of their personal efficacy. Positive mood enhances perceived self-efficacy, despondent mood diminishes it. The fourth way of modifying self-beliefs of efficacy is to reduce people's stress reactions and alter their negative emotional proclivities and misinterpretations of their physical states.
Efficacy Activated Process

Much research has been conducted on the four major psychological processes through which self-beliefs of efficacy affect human functioning.

Cognitive Processes

The effects of self-efficacy beliefs on cognitive processes take a variety of forms. Much human behaviour, being purposive, is regulated by forethought embodying valued goals. Personal goal setting is influenced by self-appraisal of capabilities. The stronger the perceived self-efficacy, the higher the challenging goals people set for themselves and the firmer is their commitment to them.

Most courses of action are initially organized in thought. Peoples’ beliefs in their efficacy shape the types of anticipatory scenarios they construct and rehearse. Those who have a high sense of efficacy, visualize success scenarios that provide positive guides and supports for performance. Those who doubt their efficacy visualize failure scenarios and dwell on the many things that can go wrong. It is difficult to achieve much while fighting self-doubt. A major function of thought is to enable people to predict events and to develop ways to control those that affect their lives. Such skills require effective cognitive processing of information that contains many ambiguities and uncertainties. In learning predictive and regulative rules people must draw on their knowledge to construct options, to weight and integrate predictive factors, to test and revise their judgments against the immediate and distal results of their actions and to remember which factors they had tested and how well they had worked.
It requires a strong sense of efficacy to remain task oriented in the face of pressing situational demands, failures and setbacks that have significant repercussions. Indeed, when people are faced with the tasks of managing difficult environmental demands under taxing circumstances, those who are beset by self-doubts about their efficacy become more and more erratic in their analytic thinking, lower their aspirations and the quality of their performance deteriorates. In contrast, those who maintain a resilient sense of efficacy set themselves challenging goals and use good analytic thinking which pays off in performance accomplishments.

**Motivational Processes**

Self-beliefs of efficacy play a key role in the self-regulation of motivation. Most human motivation is cognitively generated. People motivate themselves and guide their actions anticipatorily by the exercise of forethought. They form beliefs about what they can do. They anticipate likely outcomes of prospective actions. They set goals for themselves and plan courses of action designed to realize valued futures.

There are three different forms of cognitive motivators around which different theories have been built. They include causal attributions, outcome expectancies and cognized goals. The corresponding theories are attribution theory, expectancy-value theory and goal theory, respectively. Self-efficacy beliefs influence causal attributions. People who regard themselves as highly efficacious attribute their failures to insufficient effort, those who regard themselves as inefficacious attribute their failures to low ability. Causal attributions affect motivation, performance and affective reactions mainly through beliefs of self-efficacy.
In expectancy-value theory, motivation is regulated by the expectation that a given course of behaviour will produce certain outcomes and the value of those outcomes. But people act on their beliefs about what they can do, as well as on their beliefs about the likely outcomes of performance. The motivating influence of outcome expectancies is thus partly governed by self-beliefs of efficacy. There are countless attractive options people do not pursue because they judge they lack the capabilities for them. The predictiveness of expectancy-value theory is enhanced by including the influence of perceived self-efficacy.

The capacity to exercise self-influence by goal challenges and evaluative reaction to one's own attainments provides a major cognitive mechanism of motivation. A large body of evidence shows that explicit, challenging goals enhance and sustain motivation. Goals operate largely through self-influence processes rather than regulate motivation and action directly. Motivation based on goal setting involves a cognitive comparison process. By making self-satisfaction conditional on matching adopted goals, people give direction to their behaviour and create incentives to persist in their efforts until they fulfil their goals. They seek self-satisfaction from fulfilling valued goals and are prompted to intensify their efforts by discontent with substandard performances.

Motivation based on goals or personal standards is governed by three types of self influences. They include self-satisfying and self-dissatisfying reactions to one's performance, perceived self-efficacy for goal attainment and readjustment of personal goals based on one's progress. Self-efficacy beliefs contribute to motivation in several ways: They determine the goals people set for themselves; how much effort they expend; how long they persevere in the face of
difficulties; and their resilience to failures. When faced with obstacles and failures people who harbour self-doubts about their capabilities slacken their efforts or give up quickly. Those who have a strong belief in their capabilities exert greater effort when they fail to master the challenge. Strong perseverance contributes to performance accomplishments.

**Affective Processes**

People's beliefs in their coping capabilities affect how much stress and depression they experience in threatening or difficult situations, as well as their level of motivation. Perceived self-efficacy to exercise control over stressors plays a central role in anxiety arousal. People who believe they can exercise control over threats do not conjure up disturbing thought patterns. But those who believe they cannot manage threats experience high anxiety arousal. They dwell on their coping deficiencies. They magnify the severity of possible threats and worry about things that rarely happen. Through such ineffectual thinking they distress themselves and impair their level of functioning. Perceived coping self-efficacy regulates avoidance behaviour as well as anxiety arousal. The stronger the senses of self-efficacy the bolder people are in taking on taxing and threatening activities.

Anxiety arousal is affected not only by perceived coping efficacy but by perceived efficacy to control disturbing thoughts. Perceived self-efficacy to control thought processes is a key factor in regulating thought produced stress and depression. It is not the sheer frequency of disturbing thoughts but the perceived inability to turn them off that is the major source of distress. Both perceived coping
self-efficacy and thought control efficacy operate jointly to reduce anxiety and avoidant behaviour.

Social cognitive theory prescribes mastery experiences as the principal means of personality change. Guided mastery is a powerful vehicle for instilling a robust sense of coping efficacy in people whose functioning is seriously impaired by intense apprehension and phobic self-protective reactions. Mastery experiences are structured in ways to build coping skills and instil beliefs that one can exercise control over potential threats. Intractable phobic, of course, are not about to do what they dread. One must, therefore, create an environment so that incapacitated phobic can perform successfully despite themselves. This is achieved by enlisting a variety of performance mastery aids. Feared activities are first modelled to show people how to cope with threats and to disconfirm their worst fears. Coping tasks are broken down into subtasks of easily mastered steps. Performing feared activities together with the therapist further enables phobic to do things they would resist doing by themselves. Another way of overcoming resistance is to use graduated time. Phobic will refuse threatening tasks if they will have to endure stress for a long time. But they will risk them for a short period. As their coping efficacy increases the time they perform the activity is extended. Protective aids and dosing the severity of threats also help to restore and develop a sense of coping efficacy.

After functioning is fully restored, the mastery aids are withdrawn to verify that coping successes stem from personal efficacy rather than from mastery aids. Self-directed mastery experiences, designed to provide varied confirmatory tests of coping capabilities, are then arranged to strengthen and generalize the sense of
coping efficacy. Once people develop a resilient sense of efficacy they can withstand difficulties and adversities without adverse effects.

Guided mastery treatment achieves widespread psychological changes in a relatively short time. It eliminates phobic behaviour and anxiety and biological stress reactions, creates positive attitudes and eradicates phobic ruminations and nightmares. Evidence that achievement of coping efficacy profoundly affects dream activity is a particularly striking generalized impact.

A low sense of efficacy to exercise control produces depression as well as anxiety. It does so in several different ways. One route to depression is through unfulfilled aspiration. People who impose on themselves standards of self-worth they judge they cannot attain drive themselves to bouts of depression. A second efficacy route to depression is through a low sense of social efficacy. People who judge themselves to be socially efficacious seek out and cultivate social relationships that provide models on how to manage difficult situations, cushion the adverse effects of chronic stressors and bring satisfaction to people's lives. Perceived social inefficacy to develop satisfying and supportive relationships increases vulnerability to depression through social isolation. Much human depression is cognitively generated by dejecting ruminative thought. A low sense of efficacy to exercise control over ruminative thought also contributes to the occurrence, duration and recurrence of depressive episodes.

Other efficacy-activated processes in the affective domain concern the impact of perceived coping self-efficacy on biological systems that affect health functioning. Stress has been implicated as an important contributing factor to many
physical dysfunctions. Controllability appears to be a key organizing principle regarding the nature of these stress effects. Thus, exposure to stressors with ability to control them has no adverse biological effects. But exposure to the same stressors without the ability to control them impairs the immune system. The impairment of immune function increases susceptibility to infection contributes to the development of physical disorders and accelerates the progression of disease.

Biological systems are highly interdependent. A weak sense of efficacy to exercise control over stressors activates autonomic reactions and catecholamine secretion. These biological systems are involved in the regulation of the immune system. Stress activated in the process of acquiring coping capabilities may have different effects than stress experienced in aversive situations with no prospect in sight of ever gaining any self-protective efficacy. There are substantial evolutionary benefits to experiencing enhanced immune function during development of coping capabilities vital for effective adaptation. It would not be evolutionarily advantageous if acute stressors invariably impaired immune function, because of their prevalence in everyday life. If this were the case, people would experience high vulnerability to infective agents that would quickly do them in. There is some evidence that providing people with effective means for managing stressors may have a positive effect on immune function. Moreover, stress aroused while gaining coping mastery over stressors can enhance different components of the immune system.

There are other ways in which perceived self-efficacy serves to promote health. Lifestyle habits can enhance or impair health. This enables people to exert behavioural influence over their vitality and quality of health. Perceived
self-efficacy affects every phase of personal change, whether people even consider changing their health habits; whether they enlist the motivation and perseverance needed to succeed should they choose to do so; and how well they maintain the habit changes they have achieved. The stronger the perceived self-regulatory efficacy the more successful people are in reducing health-impairing habits and adopting and integrating health-promoting habits into their regular lifestyle. Comprehensive community programmes designed to prevent cardiovascular disease by altering risk-related habits reduce the rate of mortality.

**Selection Processes**

The discussion so far has centred on efficacy-activated processes that enable people to create beneficial environments and to exercise some control over those they encounter day in and day out. People are partly the product of their environment. Therefore, beliefs of personal efficacy can shape the course lives take by influencing the types of activities and environments people choose. People avoid activities and situations they believe exceed their coping capabilities. But they readily undertake challenging activities and select situations they judge themselves capable of handling. By the choices they make, people cultivate different competencies, interests and social networks that determine life courses. Any factor that influences choice behaviour can profoundly affect the direction of personal development. This is because the social influences operating in selected environments continue to promote certain competencies, values, and interests long after the efficacy decisional determinant has rendered its inaugurating effect.

Career choice and development is but one example of the power of self-efficacy beliefs to affect the course of life paths through choice-related
processes. The higher the level of people’s perceived self-efficacy the wider the range of career options they seriously consider, the greater their interest in them, and the better they prepare themselves educationally for the occupational pursuits they choose and the greater is their success. Occupations structure a good part of people's lives and provide them with a major source of personal growth.

TEACHERS’ SENSE OF EFFICACY

Teachers’ sense of efficacy is a judgment about capabilities to influence student engagement and learning, even among those students who may be difficult or unmotivated. Teachers with a strong sense of efficacy tend to exhibit greater levels of planning, organization and enthusiasm and spend more time teaching in areas where their sense of efficacy is higher, whereas teachers tend to avoid subjects and topics when efficacy is lower. They tend to be more open to new ideas, more willing to experiment with new methods to better meet the needs of their students, and more committed to teaching. They persist when things do not go smoothly and are more resilient in the face of setbacks. (Ashton & Webb, 1986; Coladarchi, 1992; Gibson & Dembo, 1984; Tschannen-Moran & Woolfolk Hoy, 1998).

Teacher’s self-efficacy beliefs can relate to almost every aspect of life. Self-efficacy, or one’s belief in personal capabilities, can influence career aspirations, social behaviour, reactions to stress, physical health, phobias and drug abuse (Bandura, 1997). Perceived self-efficacy regulates human functioning through cognitive processing and motivational behaviour (Bandura, 1997). Based on social cognitive theoretical framework, teacher’s self-efficacy is ‘the extent to which the teacher believes he or she has the capacity to affect student performance’
or ‘organize instruction that motivates student learning’ (Brouwers & Tomic, 2003; Bandura, 1996; Onafowora, 2004; Denzine 2005; Deemer & Minke, 1999). The literature shows that teacher efficacy is a potent construct that determines instructional effectiveness (Gusky, 1987; Deemer & Minke, 1999). The more efficacious the teacher the greater variety of instructional approaches used to support diverse educational needs.

THE IMPORTANCE OF TEACHERS’ BELIEFS

Teaching frequently involves solving ill-structured problems which are characterized by a large amount of information, open constraints and the absence of a single correct solution. Nespor (1987) argued that the ill-structured nature of many of the problems encountered by teachers resulted in teachers' beliefs playing a major role in defining tasks and selecting strategies because, unlike other forms of knowledge, beliefs can be flexibly applied to new problems. He suggested that, rather than reflective and systematic study in the course of teacher education, it seemed "likely that some crucial experience or some particularly influential teacher produces a richly-detailed episodic memory which later serves the student as an inspiration and a template for his or her own teaching practices". Pajares (1992) found that there was a "strong relationship between teachers' educational beliefs and their planning, instructional decisions, and classroom practices" and that "educational beliefs of pre-service teachers play a pivotal role in their acquisition and interpretation of knowledge and subsequent teaching behaviour".
THE NEED TO LOOK AT TEACHING EFFICACY BELIEFS OF PRE-SERVICE TEACHERS

The interest in looking at pre-service teachers’ teaching efficacy is due in part to the suggestion forwarded by Bandura that efficacy beliefs would be easily constructed in early stages of learning or training and that once these efficacy beliefs are established, they are quite permanent and resistant to change (Tschannen-Moran, Woolfolk & Hoy, 1998). Another reason is that the construct appears to have long-term implications which include aspects of interest to teacher education in general such as job satisfaction and length of a career in teaching. There are evidences to suggest that teacher training assignments and teaching practice have different influences on personal and general teaching efficacy of pre-service teachers. General Teaching Efficacy (GTE) beliefs are more likely to change when prospective teachers are exposed to vicarious learning experience and the many training tasks or assignments. Personal teaching efficacy (PTE) beliefs, on the other hand are strongly influenced by mastery learning, such as teaching practice experiences (Housego, 2002; Hoy & Woolfolk, 1993). It was also noted that at the same time, during teaching practice, general efficacy beliefs level would decline (Hoy & Woolfolk, 1993; Spector, 2004). The assumption is that realities and authentic classroom teaching experience had made pre-service teachers realize the many demands and challenges faced by teachers, and that teaching theories do not always cater for these classrooms and instructional problems. Subsequently, Weinstein (2005) noted that pre-service teachers do not usually understand the rationale and objectives of teaching practice. They often assumed teaching practice or practicum as another course requirement to fulfil, without focusing on the many responsibilities and challenges faced by teachers. They too are unsure of classroom
interaction and rapport with students, some being too friendly, while some are overly strict and authoritative. As a result, they are disappointed when their perceived performance did not match the intended outcome during practicum.

The research on self-efficacy development suggests that efficacy judgments are most malleable in the early stages of mastering a skill and become more set with experience at least as long as the context and task remain relatively stable. So it makes sense that early teaching experiences would be important shapers of efficacy judgments. If these early experiences are positive, then new teachers are better able to persist in the face of the inevitable disappointments and discouragements of the first attempts at college teaching. On the other hand, unsuccessful early experiences in teaching can direct, teacher trainee away from the profession. Taken together, the studies referenced above point towards teachers' beliefs and in particular, self-efficacy beliefs, provide sufficient reason to undertake further investigations in this area and to consider what approaches to teacher education and professional development might be effective in increasing self-efficacy for teaching. Self-efficacy in teaching contributing a lot towards teaching competency.

TEACHING COMPETENCY

Teaching competency is the skill, ability and capabilities possessed by the teacher so as to make the teaching-learning environment effective and productive, thereby, realizing the full potential of teacher as well as students and in turn achieving the goals of education.
One of the important dimensions of a renewed curriculum, five performance areas have been identified on the basis of job analysis and need analysis. They are a) performance in the classroom b) school level performance c) performance in out of school activities d) performance related to parental contact and co-operation and e) performance related to community contact and co-operation.

In order to equip teachers well in these performance areas and to enable them to become thoroughly competent to carry out these professional tasks with efficiency and insight, ten competency areas have been identified. They are as follows (Reddy, 2006):

(i) Contextual competencies: The job of the teacher is not only an integral part of the total educational system but also of the social and cultural systems in which they perform their functions. They need to be familiar with the national policies on education and state level initiatives, particularly in the field of school education and teacher education. In a world shrinking into a global village, they need to understand the local and cultural ramifications of the policies and programme. The teacher should understand the factors responsible for the problems in education like wastage and stagnation, school drop outs and retention at elementary level. The teacher should be aware of their responsibilities as persons fostering national integration and international understanding. The teacher should appreciate the deeds of committed teachers in the context of the learner, the society and basic democratic values.

(ii) Conceptual competencies: The concept of education in the emerging context requires an entirely different perception and vision. It has meaning in the context
of changing socio-economic and cultural needs of the learners need to be understood not only on the existing contexts but also in terms of new developments taking place in areas outside education as well. The teacher should understand and analyse the needs of the growing child in terms of societal and curricular inputs. The teacher should understand the special needs of children and devise teaching learning situations to optimize their learning achievement. In this context the teacher should also comprehend the importance of general objective of elementary education given in the curriculum document and understand the importance of education as a socializing process in the life of the learner.

(iii) Curricular and content competencies: Most of the teacher educators, during their initial interactions with the fresh group of student trainees, complain lack of mastery in the content to be taught in the class. This emphasizes the need to prepare quality teachers, competent and capable enough to correlate facts, reduce cramming, establish relationships and classify areas. A teacher must identify and focus special attention on the content enrichment needs of children. This also includes developing special instructional modules to enrich learners' content in different subjects and to analyze content of each subject into facts, concepts and principles. The teacher must develop a habit of keeping oneself abreast of new information and knowledge in each of the content areas, through direct reading, interaction with colleagues and experts.

(iv) Transactional competencies: Transactional competencies prepare teachers to internalize fully their functions as transmitters and facilitators of learning. The strategies to identify tools of group learning, peer learning, individual learning and to utilize teaching learning materials and other modes to achieve mastery level
attainments through motivation, collaboration and mutual interaction are the main aspects of transactional competency. The teacher must understand the merits of different teaching methods and techniques to make classroom transaction qualitative. The teacher should also understand the new information technology to weave it into transactional strategies.

(v) **Competencies on other educational activities:** Only cognitive development of the children is generally looked after by the prescribed curricular activities. The increasing tendencies of violence of various kinds, conflicts due to diversities, inability to understand the significance of pluralities and growing tendencies towards materialistic pursuits are some of the consequences of the neglect of some significant ingredients of the total human personality. The teacher should therefore participate and guide in effectively organizing different functions in the school. The teacher should offer their services in conducting social welfare activities in the school. Teacher should develop such qualities as punctuality, regularity, initiation and leadership; such skills as communication, organization and management and such values as working for a cause, working for the service to the society, sacrifice for noble cause, democratic participation, and above all service.

(vi) **Competencies related to teaching learning material:** Education in general and teacher education in particular, are no longer confined to prescribed textbooks only. While textbooks and workbooks have their place of significance which they will continue to retain in future as well, time, place and subjects also demand certain special additional inputs in terms of supplementary teaching learning materials to keep pace with the explosion of knowledge in every field at a post-haste speed. Making such materials, that may interest the
learners, requires on the part of the teachers’ insight, resourcefulness and competency to identify and select appropriate materials and prepare by themselves specific teaching cum learning aids and tools to make the teaching learning input tangible for training as well as school purpose. The teacher should identify and utilize special additional sources like children's encyclopaedia and subject dictionaries. The teacher should select learning materials as per requirements of the unit of learning methods and techniques to be used for pupils' readiness and infrastructure of the classroom.

(vii) Evaluation competencies: The area of examination or evaluation generally generates a sense of fear among children and is often considered to be the weakest link in the system of education. The evaluation approach however takes a totally different view. Evaluation is considered as a means of understanding the gaps in the learning of children which can be remedied. The teacher is expected to know the methods, techniques and ways of utilizing evaluation for diagnostic and prognostic purposes. The teacher should be aware of the different techniques and methods of continuous and comprehensive evaluation of the child's total development and suggest remedial measures for weak children.

(viii) Management competencies: This is one of the most important aspects in teacher education programme, particularly in areas like classroom management, managing the out of classroom activities, the school climate, school records and human relations at institutional levels. The result is that most of the so called trained teachers, on assuming their charge in schools, do not give much importance to management strategies and techniques in their day to day performance in schools. Teachers are a part of the schools’ administrative set up. They are the persons who
utilize the resources of the school. This develops a better understanding of the shortcomings and thus helps in rectifying them.

(ix) Competencies related to working with parents: To understand the role of parents in the child's learning and development, organize parent teacher meetings, explore and utilize educational resources of the parents for proper growth of children. Moreover, the role of the parents in the welfare of the school cannot be neglected. In the modern psychological approach towards education, it is of utmost importance that the parents work in close relation with teachers so as to identify, understand and solve problems related to behaviour.

(x) Competencies related to working with community and other agencies: To understand the importance and contribution of community in education, seek maximum community collaboration, exploit community educational resources. Various teaching methods require the use of community resources in enhancing the learning experience. Teachers must be aware and competent enough to either take community to the school or vice-versa.

Viewed in terms of inter relationships and in continuity, these competencies can be subjected to various permutations and combinations. In fact all such competencies have not simply to be acquired by teachers but also to be put into practice practically in every activity on a day to day basis. The competency areas are designed not simply to provide adequate theoretical and conceptual understanding but also to empower the teachers to perform their responsibilities with professional insight and confidence. In essence these are teaching competencies which would eventually aim at the development of the learner competencies and qualities at the school stage.
These competencies are first to be developed during pre-service teacher education and then further updated and strengthened during recurrent in-service teacher orientation as well as continuing and self-directed professional enhancement by individual teachers on their own.

While professional competencies as those mentioned above are necessary for every teacher to master, it has been observed that they by themselves do not result in effective performance. Teacher effectiveness is not automatically ensured by professional competencies and practical skills only. Thus, well-trained and effective teachers are those who are both competent and committed professional practitioners.

Teachers are said to be the architects of the future generations. Teachers can act as trail-blazers in the lives of learners and guide them in the process of education for development. If teachers acquire professional competencies and commitment, and if they are enabled and empowered to perform their multiple tasks in the classroom, then a chain reaction can begin starting with a sound teacher performance and culminating into high-quality learning among increasingly more students in cognitive, affective, and psychomotor areas of human development. Thus teaching competency of teacher trainees is important in the present context.

**SIGNIFICANCE OF THE STUDY**

Teaching as a profession has been regarded as one of the noblest professions by all in all countries and at all times. Teacher education aims at providing the prospective teachers a vivid awareness of their mission, that is, the
development of the nation through the development of the child. For this purpose, apart from cognitive development, teacher education provides its pupils training to develop better attitudes and values of our society.

As teaching is a complex and many sided task which demands a variety of human traits and ability, the ability to understand, to communicate, to inspire and motivate the students, create patience, enthusiasm, friendliness, good personality, high moral character, intelligence, caring, sense of humour and dedication to profession are the much expected traits to become a successful teacher. Moreover, the present century throws a number of challenges before the teachers. For working satisfactorily, the teachers should know how to solve problem, how to manage stress and conflicts and how to contribute with full potentials towards institutional goals as well as society and nation at large. The secondary teacher education students are at the threshold of entering the career of teaching. It is highly desirable that they have to achieve fairly good multiple intelligence, self-efficacy and teaching competency.

Teacher education plays a crucial role in structuring present system of the society and shaping the future of a nation. It has been rightly said the quality of education and the development aspects in all sectors of a country depend much upon the quality of teachers. But today the role of teacher is changing with change of time from the traditional role of an instructor; the role of teacher has changed to that of facilitator. Teaching has now become more learner-centred rather than teacher centred. Teachers are supposed to have sufficient knowledge and capability to solve the doubts of their students. In order to develop teaching competency the prospective teachers have to develop multiple intelligence and self-efficacy. So the
investigator wants to study the influence of multiple intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

This study aims at developing learner appropriate teaching methodologies to enhance teaching competency. This study will enable the teacher trainee to device learner appropriate instructional strategy. The study will ultimately benefit to the whole teaching community as it identifies the factors associated with teaching learning process. It also aims at formulating principles and guidelines to implement effective individualized techniques. This is a new area that has immense scope in the teaching learning scenario. So the investigator feels that this area of study is extremely significant.

**STATEMENT OF THE PROBLEM**

The teaching competence of the secondary teacher education students depend upon their language ability, logical thinking, visual and spatial abilities, musical abilities, inter-personal abilities and intra-personal abilities. Further, self-efficacy in teaching of the secondary teacher education students contributes a lot towards teaching competence. In this study investigator intends to find out whether multiple intelligence and self-efficacy have any influence on teaching competency. Though, there are many factors which are influencing the teaching competency of the teacher trainees, the investigator selected multiple intelligence and self-efficacy in this study. The problem is entitled as

“INFLUENCE OF MULTIPLE INTELLIGENCE AND SELF-EFFICACY OF THE SECONDARY TEACHER EDUCATION STUDENTS ON THEIR TEACHING COMPETENCY”.

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OPERATIONAL DEFINITIONS

The investigator adopted the following definitions for the terms used in this title.

INFLUENCE

It is the effect that the multiple intelligence and self-efficacy have on the secondary teacher education students’ teaching competency.

MULTIPLE INTELLIGENCE

According to Howard Gardner (1983) “it is a set of skills allowing individuals to find and resolve genuine problems they face”. Multiple intelligence includes verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalistic intelligence.

SELF-EFFICACY

According to Albert Bandura (1977) “self-efficacy is beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments”. Bandura (1986) defines self-efficacy as an intellectual activity by which one forges one’s beliefs about his or her ability to achieve certain level of accomplishments.

In the present study self-efficacy refers to the efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere and pedagogic analysis of the secondary teacher education students.
TEACHING COMPETENCY

It is the ability of the teacher trainees to execute a mastery level teaching with all that they handle as part of their profession. It refers to their performance level and skill in handling a topic to the best satisfaction of the learner.

In the present study teaching competency refers to the competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation and classroom dynamics of the secondary teacher education students.

SECONDARY TEACHER EDUCATION STUDENTS

Students those who are studying Bachelor of Education (B. Ed.) in colleges of education affiliated to Mahatma Gandhi University, after completing their graduation or post-graduation.

MAHATMA GANDHI UNIVERSITY

Mahatma Gandhi University is one of the universities in Kerala, situated in Kottayam district.

KOTTAYAM DISTRICT

This is one among the 14 revenue districts in Kerala. Kerala is one of the southern states of India. It represents only 1.8% of total area of India. The first fully literate municipal town and district in India are in Kerala. In 1991, Kerala became the first fully literate state in India.
GENERAL OBJECTIVES

1. To find out the level of multiple intelligence of the secondary teacher education students.

2. To find out the level of self-efficacy of the secondary teacher education students.

3. To find out the level of teaching competency of the secondary teacher education students.

4. a. To find out the relationship between multiple intelligence and self-efficacy of the secondary teacher education students.

b. To find the relationship between multiple intelligence and teaching competency of the secondary teacher education students.

c. To find out the relationship between self-efficacy and teaching competency of the secondary teacher education students.

5. To find out the influence of multiple intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

6. To find out the significant factor with positive loading of the variables namely verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic intelligence, self-efficacy and teaching competency.
SPECIFIC OBJECTIVES

1. **Multiple Intelligence of the Secondary Teacher Education Students**
   
1.1 To find out whether there is any significant difference between male and female secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.2 To find out whether there is any significant difference between aided and un-aided college secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.3 To find out whether there is any significant difference between graduate and post-graduate secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.4 To find out whether there is any significant difference among English, Mathematics, Natural Science, Physical Science and Social Science optional subject secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.5 To find out whether there is any significant association between parents’ annual income and verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence of the secondary teacher education students.
2. **Self-Efficacy of the Secondary Teacher Education Students**

2.1 To find out whether there is any significant difference between male and female secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.

2.2 To find out whether there is any significant difference between aided and un-aided college secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.

2.3 To find out whether there is any significant difference between graduate and post-graduate secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.

2.4 To find out whether there is any significant difference among English, Mathematics, Natural Science, Physical Science and Social Science optional subject secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.
2.5 To find out whether there is any significant association between parents’ annual income and efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy of the secondary teacher education students.

3. Teaching Competency of the Secondary Teacher Education Students

3.1 To find out whether there is any significant difference between male and female secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.2 To find out whether there is any significant difference between aided and un-aided college secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.3 To find out whether there is any significant difference between graduate and post-graduate secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.4 To find out whether there is any significant difference among English, Mathematics, Natural Science, Physical Science and Social Science optional
subject secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.5 To find out whether there is any significant association between parents’ annual income and competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency of the secondary teacher education students.

4.a. Relationship between Multiple Intelligence and Self-Efficacy of the Secondary Teacher Education Students

4.a.1 To find out whether there is any significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and self-efficacy of the secondary teacher education students.

4.a.2 To find out whether there is any significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and self-efficacy of the male secondary teacher education students.

4.a.3 To find out whether there is any significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and self-efficacy of the female secondary teacher education students.
4.b. Relationship between Multiple Intelligence and Teaching Competency of the Secondary Teacher Education Students

4.b.1 To find out whether there is any significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and teaching competency of the secondary teacher education students.

4.b.2 To find out whether there is any significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and teaching competency of the male secondary teacher education students.

4.b.3 To find out whether there is any significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and teaching competency of the female secondary teacher education students.

4.c. Relationship between Self-Efficacy and Teaching Competency of the Secondary Teacher Education Students

4.c.1 To find out whether there is any significant relationship between self-efficacy and teaching competency of the secondary teacher education students.

4.c.2 To find out whether there is any significant relationship between self-efficacy and teaching competency of the male secondary teacher education students.
4.c.3 To find out whether there is any significant relationship between self-efficacy and teaching competency of the female secondary teacher education students.

5. Influence of Multiple Intelligence and Self-Efficacy of the Secondary Teacher Education Students on their Teaching Competency

5.1 To find out whether there is any significant influence of verbal-linguistic intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.2 To find out whether there is any significant influence of logical-mathematical intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.3 To find out whether there is any significant influence of visual-spatial intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.4 To find out whether there is any significant influence of bodily-kinesthetic intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.5 To find out whether there is any significant influence of musical-rhythmic intelligence self-efficacy of the secondary teacher education students on their teaching competency.

5.6 To find out whether there is any significant influence of inter-personal intelligence and self-efficacy of the secondary teacher education students on their teaching competency.
5.7 To find out whether there is any significant influence of intra-personal intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.8 To find out whether there is any significant influence of naturalistic intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.9 To find out whether there is any significant influence of multiple intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

6.1 To find out whether there is any significant factor with positive factor loading of the variables namely verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic intelligence, self-efficacy and teaching competency.

NULL HYPOTHESES

1. Multiple Intelligence of the Secondary Teacher Education Students

1.1 There is no significant difference between male and female secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.2 There is no significant difference between aided and un-aided college secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.
1.3 There is no significant difference between graduate and post-graduate secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.4 There is no significant difference among English, Mathematics, Natural Science, Physical Science and Social Science optional subject secondary teacher education students in their verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence.

1.5 There is no significant association between parents’ annual income and verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic and multiple intelligence of the secondary teacher education students.

2. Self-Efficacy of the Secondary Teacher Education Students

2.1 There is no significant difference between male and female secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.

2.2 There is no significant difference between aided and un-aided college secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.
2.3 There is no significant difference between graduate and post-graduate secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.

2.4 There is no significant difference among English, Mathematics, Natural Science, Physical Science and Social Science optional subject secondary teacher education students in their efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy.

2.5 There is no significant association between parents’ annual income and efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere, pedagogic analysis and self-efficacy of the secondary teacher education students.

3. **Teaching Competency of the Secondary Teacher Education Students**

3.1 There is no significant difference between male and female secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.2 There is no significant difference between aided and un-aided college secondary teacher education students in their competency in subject,
communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.3. There is no significant difference between graduate and postgraduate secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.4 There is no significant difference among English, Mathematics, Natural Science, Physical Science and Social Science optional subject secondary teacher education students in their competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

3.5 There is no significant association between parents’ annual income and competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation, classroom dynamics and teaching competency.

4.a. Relationship between Multiple Intelligence and Self-Efficacy of the Secondary Teacher Education Students

4.a.1 There is no significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and self-efficacy of the secondary teacher education students.
4.a.2 There is no significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and self-efficacy of the male secondary teacher education students.

4.a.3 There is no significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and self-efficacy of the female secondary teacher education students.

4.b. Relationship between Multiple Intelligence and Teaching Competency of the Secondary Teacher Education Students

4.b.1 There is no significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and teaching competency of the secondary teacher education students.

4.b.2 There is no significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and teaching competency of the male secondary teacher education students.

4.b.3 There is no significant relationship between verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic, multiple intelligence and teaching competency of the female secondary teacher education students.
4.c. Relationship between Self-Efficacy and Teaching Competency of the Secondary Teacher Education Students

4.c.1 There is no significant relationship between self-efficacy and teaching competency of the secondary teacher education students.

4.c.2 There is no significant relationship between self-efficacy and teaching competency of the male secondary teacher education students.

4.c.3 There is no significant relationship between self-efficacy and teaching competency of the female secondary teacher education students.

5. Influence of Multiple Intelligence and Self-Efficacy of the Secondary Teacher Education Students on their Teaching Competency

5.1 There is no significant influence of verbal-linguistic intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.2 There is no significant influence of logical-mathematical intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.3 There is no significant influence of visual-spatial intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.4 There is no significant influence of bodily-kinesthetic intelligence and self-efficacy of the secondary teacher education students on their teaching competency.
5.5 There is no significant influence of musical-rhythmic intelligence self-efficacy of the secondary teacher education students on their teaching competency.

5.6 There is no significant influence of inter-personal intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.7 There is no significant influence of intra-personal intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.8 There is no significant influence of naturalistic intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

5.9 There is no significant influence of multiple intelligence and self-efficacy of the secondary teacher education students on their teaching competency.

6.1 There is no significant factor with positive factor loading of the variables namely verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal, naturalistic intelligence, self-efficacy and teaching competency.

LIMITATIONS OF THE STUDY

1. The present study is limited to the B. Ed. colleges affiliated to Mahatma Gandhi University, Kottayam area only.

2. The investigator studied only eight intelligences namely verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal and naturalistic intelligence.
3. Multiple intelligence score is taken by adding the scores of all the eight intelligences namely verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, inter-personal, intra-personal and naturalistic intelligence.

4. Self-efficacy score is taken by adding the scores of all the nine dimensions of self-efficacy namely efficacy in teaching, class management, guidance, organizing extra curricular activity, preparing lesson plan, preparing learning material, using ICT, creating positive classroom atmosphere and pedagogic analysis.

5. Teaching competency score is taken by adding the scores of all the eight dimensions of teaching competency namely competency in subject, communication, instructional strategy, use of learning material, class management, evaluation, motivation and classroom dynamics.